

R E M A R K S

Applicant has carefully considered the Office Action of June 30, 2005 concerning all pending claims (1-32). The present response is intended to fully address all points of objection raised by the Examiner, and reconsideration is hereby requested.

Claim 26 has been amended to be dependent on claim 19. Claim 29 has been amended to describe the purpose of enlarging the distance between the substrate and the imaging surface, as described in the specification on page 6, lines 11-13.

The Office Action states (page 5, item 8, last line) that the claims have been interpreted such that repeating step (h) occurs at least once. This was not the Applicant's intention, rather steps (d)-(g) are optionally repeated until the thickness of the image is sufficient. Claims 1 and 31 have been amended to include the term "optionally" in step (h).

The present invention discloses a method of digitally constructing a flexographic printing plate, without the need for the multiple steps of exposing, washing and drying a silver halide-based film typically found in prior art non-digitally constructed flexographic plates. The invention, best seen in Figure 1 and its description, utilizes a "computer to plate" technique in which elastomeric inkjet ink is jetted to form an image on an imaging surface, then gelled using UV radiation, and the gelled layer is transferred to a previously deposited and cured elastomeric "matrix floor" present on a plate substrate. The gelled layer is bonded to the matrix floor layer, for instance using UV radiation.

Further layers of gelled inkjetted ink can then be inkjetted onto the imaging surface and transferred onto the plate substrate upon the previously transferred layers, to thicken the inkjetted image to a thickness appropriate for flexographic printing. Since flexographic printing may be used to print onto uneven surfaces, such as corrugated cardboard, 100 such layers may be necessary to form a thick image upon the plate. A second ink can then be applied to the image formed, and printing can be performed.

It is important to note that in the present invention, the inkjetted ink is not applied onto the object to be printed. Rather it serves a structural function on the printing plate, where it forms a raised relief pattern in which the presence or absence of inkjetted ink at a specific spot determines whether a second ink applied to the plate substrate will adhere to the inkjetted layers and be passed onto the object undergoing printing.

The Examiner has rejected claims 18, 23-29 and claims 19-21, 22, 30, under Secs. 102(e) and 103 based on Kakishita (US Pat. 6,387,594) alone and in combination with Verscheuren (US Pat. 6,699,640), Mengel (US 2003/0211423), and Mori (US Pat. 6,895,860).

The Kakishita reference describes use of inkjet ink for shielding a photosensitive member from UV radiation.

Typical formation of a plate, prior to Kakishita, includes covering a photosensitive member, such as a UV curable polymeric compound, with a silver salt-containing film. The film is previously exposed to visible light, using a camera, to capture an image onto the film. After placement of the film on the photosensitive material, UV or visible light is applied, to pass through areas on the film that are transparent, and reach the photosensitive material, which will undergo a reaction and polymerize in the areas where the light has penetrated. The unpolymerized areas of the photosensitive material are then washed and removed, leaving raised polymerized areas that can be inked and used as a plate.

Kakishita aims to eliminate the silver salt-containing film, by using a photomask instead of the silver salt-containing film. UV-absorbing ink is jetted onto a transparent plastic film, to obscure portions of the plastic film. This is termed a "photomask".

The photomask is placed over the photosensitive material (essentially a UV curable polymeric compound), and UV light is then shined through the plastic film, to reach the polymeric compound only through transparent areas of the photomask. Those areas will polymerize and will form the relief image which can be

inked and used for printing. In column 3, lines 5-15; column 4, lines 43-65; column 7 lines 5-12 and column 12, lines 2-12 of Kakishita, the inkjetted ink is described as being UV-shielding and is used to form a photomask to be placed upon a photosensitive member. After the photosensitive member is exposed to UV light, and washed, it will form the plate.

Other photomasks using inkjetted ink are known in the art. See page 3, lines 14-24 of the present invention, which describes prior art photomasks which use inkjetted ink to block UV radiation.

In the present invention, the inkjetted ink does not act to shield a photosensitive member from UV light, rather it acts as a structural part of the image on the final plate, necessary to print using the final plate.

Kakishita does not disclose depositing inkjet ink onto a surface, gelling the inkjet ink then transferring the inkjet ink to an elastomeric matrix floor layer present upon a plate. The inkjetted ink in Kakishita does not bond with a matrix floor to form an integral part of a plate. Rather, the inkjetted ink in Kakishita has a transient function in the intermediate step of masking the photosensitive member from UV light, after which the inkjetted ink and its supporting plastic film are removed from the photosensitive member which forms the final plate.

As stated in the decision in *In Re Marshall*, 198 USPQ 344 (1978), "To constitute an anticipation, all material elements recited in a claim must be found in one unit of prior art...". Since the Kakashita reference neither 1) identically describes the invention, nor 2) enables one skilled in the art to practice it, Applicant deems the 102(e) rejection improper, and respectfully requests that it be withdrawn.

Since Kakishita does not disclose the invention, Applicant believes the combination of Kakishita and other citations (Verscheuren, Mengel and Mori) to form the basis of the Sec. 103(a) rejection is improper, and Applicant respectfully requests that it be withdrawn.

In citing the references under Sec. 103(a), the question is raised whether the references would suggest the invention, as stated in the decision of In Re Lintner (172 USPQ 560, 562, CCPA 1972);

"In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed substitution, combination or other modification."

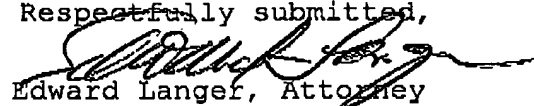
Similarly, In Re Regel (188 USPQ 136, CCPA 1975) decided that the question raised under Sec. 103 is whether the prior art taken as a whole would suggest the claimed invention to one of ordinary skill in the art. Accordingly, even if all the elements of a claim are disclosed in various prior art references, the claimed invention taken as a whole cannot be said to be obvious without some reason given in the prior art why one of ordinary skill would have been prompted to combine the teachings of the references to arrive at the claimed invention.

Simply put, and as stated in In Re Clinton (188 USPQ 365 CCPA 1976), "do the references themselves... suggest doing what appellants have done", such that there is a requirement that the prior art must have made any proposed modification or changes in the prior art obvious to do, rather than obvious to try.

It is respectfully put forward by the Applicant that there is no reason to consider the prior art references either individually or in combination, as rendering the invention obvious.

Based on the above remarks, Applicant believes that the invention is novel and inventive and that all the pending claims in the application are deemed to be allowable. Further reconsideration and allowance of the application is respectfully requested at an early date.

Respectfully submitted,

  
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